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Celebrating a Milestone in EOH: The Pioneering First Issue of the Journal of Industrial Hygiene, May 1919

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Historical Vignette

Celebrating a Milestone in EOH: The Pioneering First Issue of the *Journal of Industrial Hygiene*, May 1919

Derek R. Smith, PhD, DrMedSc, MPH

Early 1919 was an interesting time in human history, and particularly so in the United States (US). The First World War had just ended and prohibition was just beginning. President Theodore Roosevelt (1858–1919) had recently died in his sleep and an act of Congress had just established most of the Grand Canyon as a US National Park.¹ Big things were also underway in a newly emerging field then-known as industrial hygiene—forerunner of today's *Environmental and Occupational Health* (EOH).² Two of the earliest nationwide surveys of industrial medicine services had just been conducted and published in the Public Health Bulletin and the Bureau of Labor Statistics Bulletin. The first book written specifically for industrial nurses, *Industrial Nursing* by Florence Swift Wright, had just hit the shelves.³ In Massachusetts considerable progress was also being made at Harvard University, where 10 years earlier a department of preventive medicine and hygiene had been formed, followed by a then-unheard of division of industrial hygiene in 1918.⁴ This had occurred because the university received funding between 1917 and 1923 to establish work in industrial hygiene,⁵ which helped further the cause of occupational medicine and also led to an increased demand for scientific publication in this area.⁶ The decade between 1910 and 1920 had also seen workers' compensation insurance percolate throughout much of the US, albeit up to a generation later than had been the case in Western Europe.⁷

Amidst this rich historical backdrop occurred another pioneering feat that would later loom large in the history of EOH: publication of the *Journal of Industrial Hygiene* (JIH) in May 1919 with David L. Edsall, M.D., S.D., and Albert F. Stanley Kent, A.M., D.Sc., as founding editors.⁶ David Edsall (1869–1945) had just been appointed Dean of Harvard

Medical School,⁸ and the era in which he served would later be recognised as a crucial period in its development.⁹ Edsall was an outspoken advocate of the new discipline, having described the relationship between industry and general medicine in an article 5 years earlier.¹⁰ His co-editor was Albert Stanley Kent (1863–1958), a Professor of Physiology at the University of Bristol in Great Britain.¹¹ The inaugural issue of their journal, the JIH, would comprise four scientific articles and two book reviews, as shown in Table 1.

The first article,¹² *Industrial medicine and surgery—A resume of its development and scope*, was written by Harry E. Mock, M.D., who was at the time a Lieutenant Colonel with the Office of the Surgeon General, Division of Reconstruction of Disabled Soldiers, and formerly Chief Surgeon at the Sears, Roebuck Company. Harry Mock (1880–1959) had been instrumental in founding one of the first occupational medicine clinics within an academic medical centre, the Rush Medical College in Chicago.¹³ Mock had been closely involved in formation of the *American Association of Industrial Physicians and Surgeons*, the history of which is well-described in his JIH article. In the same year as the JIH came out Mock also published an authoritative text titled *Industrial Medicine and Surgery*, which helped develop a general theory of occupational medicine.¹³

The second article,¹⁴ *Lead poisoning in American industry*, was written by Alice Hamilton, M.D., who was at the time a Special Investigator with the Department of Labor. She had also just been appointed as the first female faculty member at Harvard University and would eventually reach the heights of Professor Emeritus in 1935,¹⁵ albeit without ever insisting on her right to use the Harvard Club or demand her quota of football tickets.¹⁶ Alice Hamilton (1869–1970)

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Table 1.—Articles Published in the *Journal of Industrial Hygiene*, Volume 1, Issue 1, May 1919

Author	Title of Article	Category	Pages
Harry E. Mock	Industrial medicine and surgery - A resume of its development and scope.	Literature Review	1–8
Alice Hamilton	Lead poisoning in American industry.	Literature Review	8–21
Reynold A. Spaeth	The problem of fatigue.	Literature Review	22–53
Anna G. Richardson	Telephone operating: A study of its medical aspects with statistics of sickness disability reports.	Original Research	54–67
Katherine R. Drinker	<i>Italian Women in Industry, A Study of Conditions in New York City</i> by Louise C. Odencrantz (Russell Sage Foundation, New York, 1919).	Book Review	68
Cecil K. Drinker	<i>Physical and Occupational Re-Education of the Maimed</i> by Jean Camus (William Wood & Company, New York, 1919).	Book Review	68

would later be lauded as one of the most influential occupational physicians of her time, and is now generally acknowledged as a founder of regulatory toxicology and industrial hygiene in the US.¹³ Her JIH article was based on a *Cutter Lecture in Preventive Medicine and Hygiene* which had been delivered by Hamilton in conjunction with the aforementioned Harry Mock and Thomas Morrison Legge at Harvard Medical School on April 2, 1919. Although relatively new at the time, the Cutter Lecture is now an ongoing institutionalised lecture series in the fields of preventive medicine and epidemiology administered by the Department of Epidemiology at the Harvard School of Public Health. It began in 1912 following a bequest from a former Harvard graduate, John Clarence Cutter.¹⁷

The third article,¹⁸ *The problem of fatigue*, was written by Reynold A. Spaeth, Ph.D., who was at the time an Associate in Physiological Hygiene at the School of Hygiene and Public Health in Johns Hopkins University. Reynold Albrecht Spaeth (1886–1925) had been born into a family with many members distinguished for their achievements, including his father, Adolph Spaeth, D.D., LL.D.¹⁹ Although personally interested in natural history, Reynold Spaeth had researched the problem of fatigue and its relation with industrial and public health, with a particular focus on the relationship between fatigue and resistance to infection.²⁰ He eventually resigned from Johns Hopkins to take up a Chair of Physiology at Chulalongkorn University in Siam (now Thailand). Spaeth tragically contracted an infection while collecting material for his ongoing work on the reproductive cycle of monkeys, and died in Bangkok in 1925.²¹ A collection of 18 Gibbons he collected from the Sriracha region of Thailand, *The Spaeth Gibbon Collection*, is now housed at the Anthropological Institute of Zurich University in Switzerland.²² A *Spaeth Memorial Lectureship* was also founded by a \$3000 donation from his widow in 1928,²³ with the first of the series being held two years later in 1930.²⁴

The fourth article in Volume 1 of the JIH,²⁵ *Telephone operating: A study of its medical aspects with statistics of sickness disability reports*, was written by Anna G. Richardson, M.D., who was at the time a physician of the New England Telephone and Telegraph Company in Boston.

Unfortunately, no historical record or further publications by Richardson appear to have found their way into the literature since that time. Two book reviews rounded out Volume 1, Issue 1 on page 68 of the JIH. The first was written by Katherine R. Drinker and reviewed the book: *Italian Women in Industry, A Study of Conditions in New York City* by Louise C. Odencrantz (published by the Russell Sage Foundation, New York, 1919).²⁶ Katherine R. Drinker (1889–1956), was a physician and member of the faculty at Harvard who was closely involved in the daily running of the original JIH.²⁷ The second book review was written by Cecil K. Drinker and examined the book: *Physical and Occupational Re-Education of the Maimed* by Jean Camus (published by the William Wood & Company, New York, 1919).²⁸ Cecil K. Drinker (1887–1956) was a Professor of Physiology at Harvard,²⁹ a position he held until retirement in 1948.³⁰

In the modern world, with scientific journals being ubiquitous in virtually all fields, (including EOH), it is difficult to comprehend what a pioneering feat publication of the first JIH issue really was. The JIH would go on to have a succession of publishers starting with the Macmillan Company for Volume 1, followed by the Harvard Medical School for Volumes 3–7, the Harvard School of Public Health for Volumes 8–14, and Williams & Wilkins from Volume 15 onwards. As most readers will know, the JIH would eventually have a long and distinguished history spread over seven different journal titles, namely the *Journal of Industrial Hygiene and Toxicology* (1936–1949), the *Archives of Industrial Hygiene and Occupational Medicine* (1950), the *American Medical Association (A.M.A.) Archives of Industrial Hygiene and Occupational Medicine* (1950–1954), the *A.M.A. Archives of Industrial Health* (1955–1960), the *Archives of Environmental Health* (1960–2004), and finally, the modern day *Archives of Environmental & Occupational Health* (AEOH).³¹

Aside from the pioneering nature of the journal itself, it is also necessary to acknowledge the scientific importance of the articles it contained. At least two of the authors, Mock and Hamilton, would go on to distinguished careers and become household names in EOH. Similarly, the articles themselves have appeared regularly in the scientific literature. Although it is difficult to track citations to articles over 90 years old,

a 'Cited Reference Search' of the Thomson Reuters *Web of Science*[®] (WoS) database conducted in 2010 does reveal certain differences in citation frequency between these articles. Hamilton's article was the most highly cited, followed closely by the article written by Spaeth. Mock's article had fewer than five citations, while Richardson's article had received none at all. Highly cited articles at the JIH, generally, are described in more detail elsewhere.³²

Regardless of how many times its articles were cited or not, there can be no doubt that foundation of the original JIH in 1919 was a truly inspired event. For 90 years this periodical and its successors would serve pioneering roles in the collection and dissemination of scientific data, while its editorial boards featured a veritable 'who's who' of EOH of the day. In 2010 the journal, now known as the AEOH, continues to deliver in the spirit of these groundbreaking individuals and their noble ideals.

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